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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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ROSEEN, R. EXAMINER	
ART. UNIT	PAPER NUMBER
	2

DATE MAILED: 09/17/87

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice re Patent Drawing, PTO-948.       |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449                  | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474      | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-16 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-16 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections **MUST** be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

Art Unit 254

The drawings are objected to because in Fig. 5 not all the views are shown with reference line A as a guide. Fig. 7 has far too many pieces of drawings. Correction is required.

Applicant is required to submit a proposed drawing correction in response to this Office action. However, correction of the noted defect can be deferred until the application is allowed by the examiner.

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6 do not provide any structure or function corresponding to any of the embodiments because it contains too little descriptive information. Resistances are described as being extended between signals which is an incorrect way to use the word "extended" in English. Does a further phase-shifted signal mean a signal which has been shifted in phase further from another? This also is indefinite as it implies some unrecited degree of phase shifting. How are the resistors connected? What makes this output from a tap on the resistor? Where is the phase-shift device connected?

The last line of claim 2, "in" should be with.

In claim 3, what does derived directly mean? Does it mean that the input signal is not phase-shifted.

In claim 4, apparently claim 1 was in error and there is only one resistor but several unrecited

taps.

In claim 5, if all these phase-shifted signals are phase-shifted by  $360^\circ$  then there is no phase shift occurring.

In claim 6, no, there is an additional resistor. Some consistency between the claims would render the claims more definite and understandable.

In claim 7, what does a ring counter form? This is unsupported by the drawing where it just shows a ring.

In claim 8, for reasons of clarity mentioned above this limitation does not make sense. Are there several or only one resistor.

In claim 9, does this mean the tap moves?

The drawings contain no support for claims 10-12.

In claim 13, is the phase shifted input signal selectable at said common output?

In claims 13 and 14, in the multipliers what is being multiplied by what?

Claim 15 makes no sense at all for the same reasons as in claim 1 and no support in the drawing or specification can be found for it. How can a resistance extend  $360^\circ$ ?

Claim 16 is not supported by the drawings or the specification because no delay means is disclosed. Connections of any of the devices in the claim are lacking or incomplete.

The following is a quotation of 35 U.S.C. 103

Art Unit 254

which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-16 are rejected under 35 U.S.C. 103 as being unpatentable over Hoff, Jr. et al.

Hoff et al. shows variable resistor  $R_3$  with a tap 18.  $R_3$  is used to adjust phase shift while in series <sup>with</sup> capacitor  $C_1$ . Hoff et al. obviates the instant invention because it lacks any definition beyond what the Hoff et al. provides.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schwte and Elliott, show other prior art phase shift producers adjustable by a variable resistor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Roseen whose telephone number is (703) 557-4755.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 557-3311.

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SUPERVISORY PATENT EXAMINER  
GROUP ART UNIT 254